TTACHING CABLE (continued)

2. Attach the **Bead Chain** to the **Two Bead Connector.** Secure beads by folding down the metal tabs. The following parts will be used when installed properly: **Two Bead Connector, Bead Chain, Bead Chain Connector, and Bead Chain Connector Cover. (Figure 16)**

3. Remove clip or pin which retains throttle cable (and washer if provided) and install **Two Bead Connector** on the same side of throttle cable as the **Cable Assembly** will be anchored. This is necessary so that **Cable Assembly** and throttle cable will not cross.

4. The **Two Bead** may need to be bent so that it clears the throttle cable. **(Figure 17)** Also, the **4" Tie Strap** can be used to hold the **Two Bead Connector** to the sleeve of the throttle cable. **(Figure 17)**

NOTE: After the Cable Assembly has been Attached, manually move the throttle to assure the Cable Assembly does not hang up on any part of the vehicle.

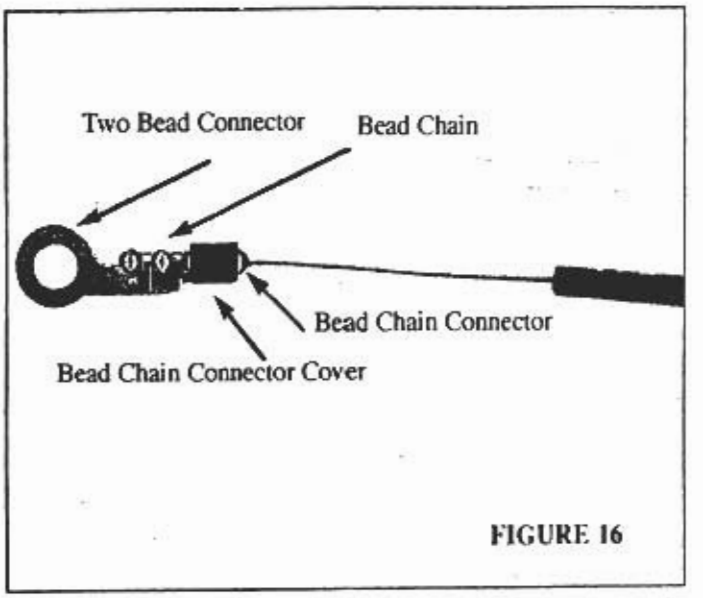


FIGURE 16

GM, Ford, and Chrysler Throttle Using THROTTLE CLIP WITH CABLE

1. Some GM, Ford, and Chrysler vehicles have an attachment stud on the throttle pulley.

2. Slide a Bead Chain Connector Cover over the cruise cable, then attach the Bead Chain Connector to the cable. Attach the Throttle Clip with Cable to the Bead Chain Connector And slide the Connector Cover over the Bead Chain Connector. **(Figure 18)**

3. Slide the Throttle Clip over the throttle pulley attachment stud. Push Throttle Clip onto the stud until it snaps firmly onto the stud.

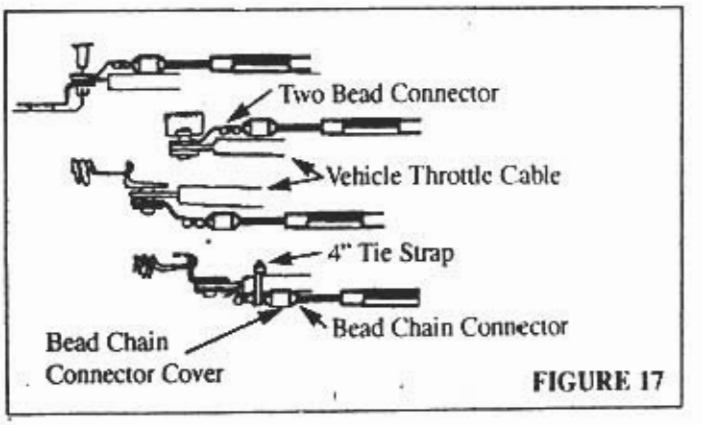


FIGURE 17

ARNING: Failure to follow the instruction anual could cause the Cruise Control to wor nproperly, possibly causing damage to your ehicle and injury or death to you and your assengers.

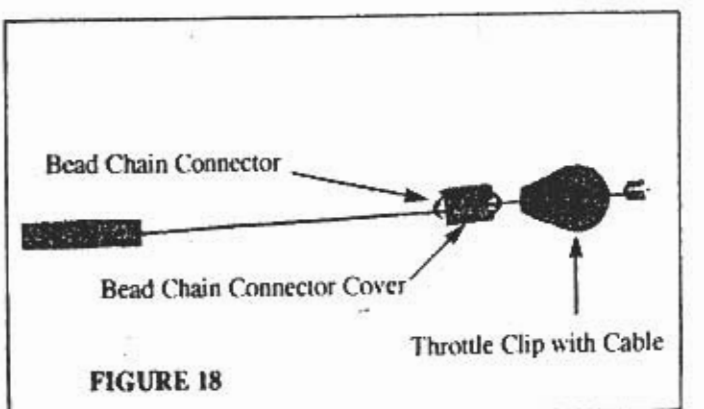


FIGURE 18

Anchoring Cable Assembly

There are three (3) types of connectors used to anchor the **Cable Assembly:**

A. Snap-In Adapter
B. General Motors Blank Anchor
C. Threaded Tube Clamp

A. Snap-In Adapter

1. To use the **Snap-In Adapter**, it will be necessary to form threads on the end of the **Cable Assembly.** This is easily accomplished by placing the **1/4" - 20 Nut** on the end of the **Cable Assembly** with your fingers. Then use a 7/16" box end wrench and turn clockwise until the desired amount of threads have been formed. **(Figure 19)**
2. After the threads have been formed, screw the **Snap-In Adapter** on to the **Cable Assembly. (Figure 20)**

NOTE: Cable Assembly must extend past the end of the **Snap-In Adapter** on all applications.

3. The **Snap-In Adapter** snaps into the square hole of the **Extension Bracket (Figure 21)** or snaps into an existing square hole on the vehicle – common on GM vehicles. **(Figure 22)**

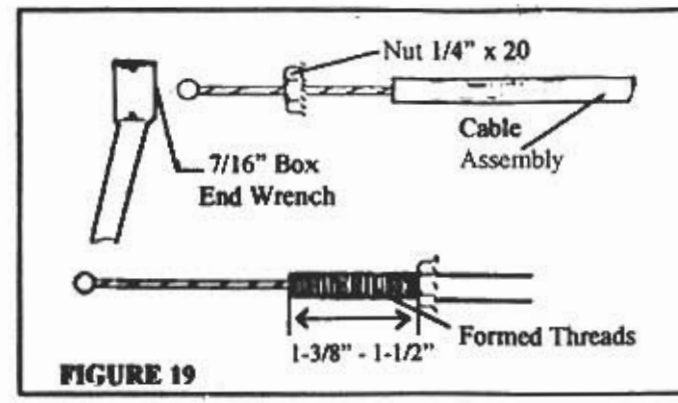


FIGURE 19

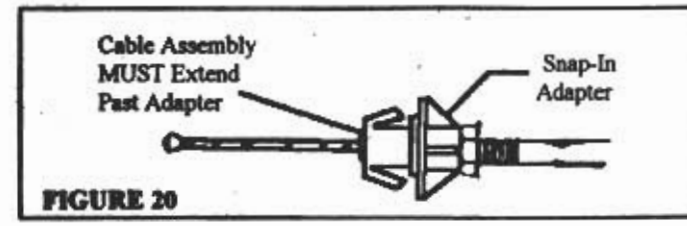


FIGURE 20

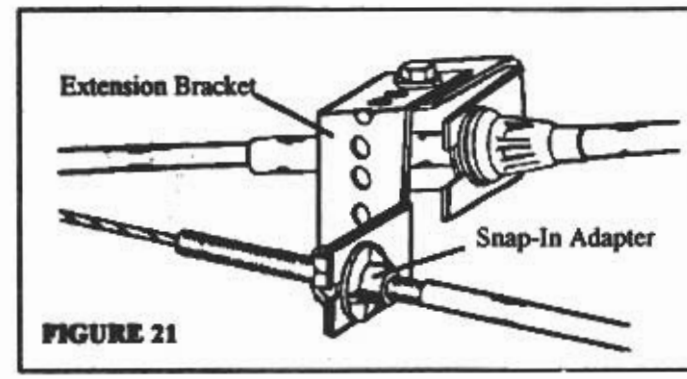


FIGURE 21

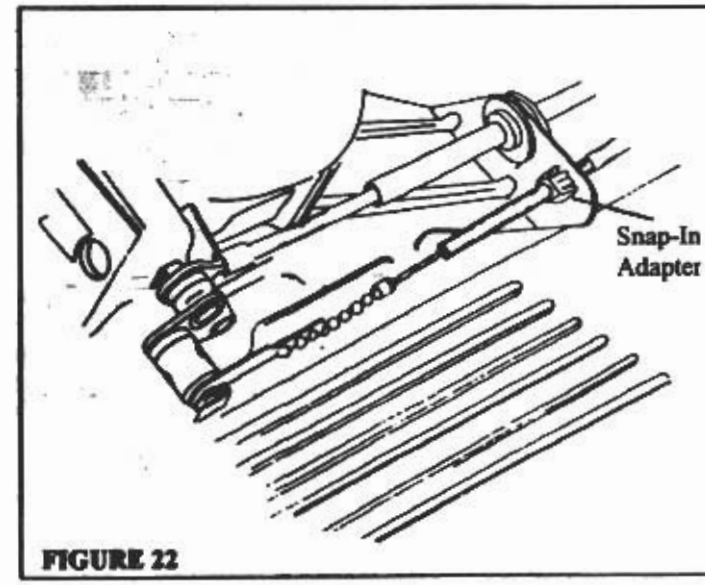


FIGURE 22

Anchoring Cable Assembly (Continued)

General Motors Blank Anchor

1. To locate the blank anchor on General Motors vehicles, it is necessary to remove the air cleaner. The blank anchor is located above the throttle anchor.
2. This anchor is hollow except at one end. Use a 1/4" bit and drill as shown in **Figure 23.**
3. Before using the **1/4"-20 Nut,** remove the **Adjustable Sleeve** from the **Cable Assembly.** Then use the **1/4"-20 Nut** to form threads on the end of the **Cable Assembly.** This is easily accomplished by first placing the **1/4" - 20 Nut** on the end of the **Cable Assembly** with your fingers and then use a 7/16" box end wrench and turn clockwise until the desired amount of threads have been formed. **(Figure 19, page 14)**
4. Insert the **Cable Assembly** through the blank anchor and thread the other **1/4" - 20 Nut** in place. **(Figure 24)**

NOTE: If you do not use the other **1/4" - 20 Nut,** install a **Tube Clamp** and the **Threaded Tube Clamp** 6" to 7" from the anchor point. **(Figure 25)** This will keep the **Cable Assembly** from backing out of the anchor.

5. The **1/4" - 20 Nut** can also be used if there is a pre-existing 1/4" hole in a bracket on the vehicle or if it is possible to drill a 1/4" hole in a bracket on the vehicle. **(Figure 26)**

WARNING
Failure to follow the instruction manual could cause the Cruise Control to work improperly, possibly causing damage to your vehicle and injury or death to you and your passengers.

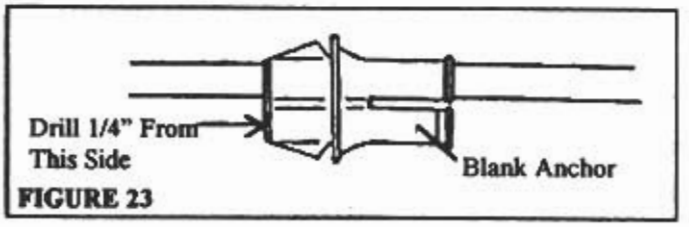
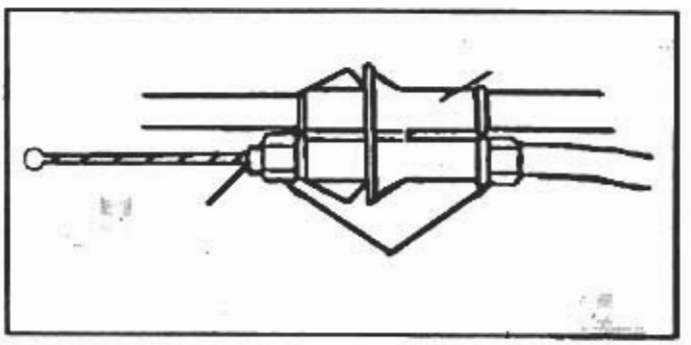


FIGURE 23



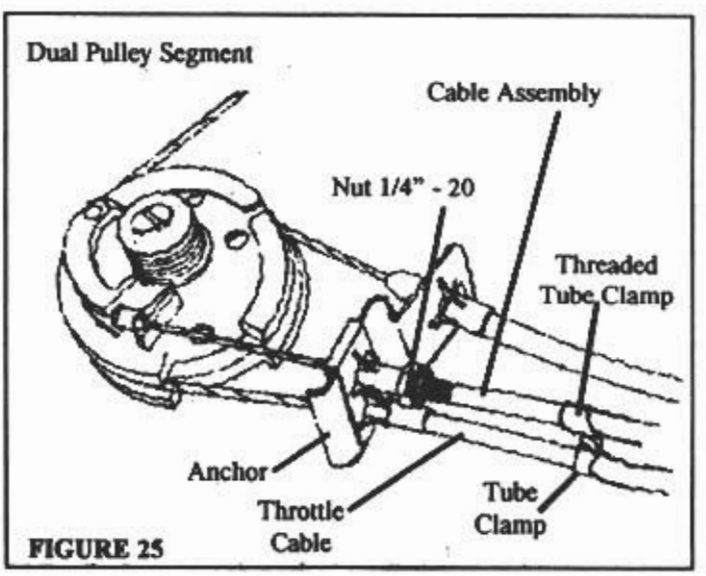


FIGURE 25

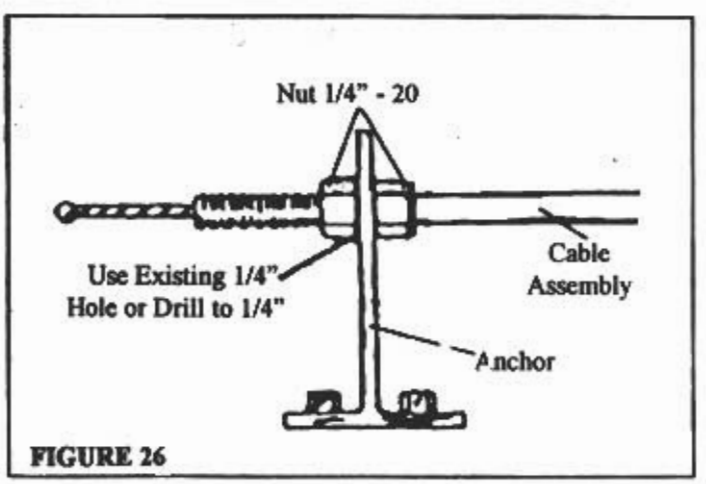


FIGURE 26

Anchoring Cable Assembly (Continued)

C. *Threaded Tube Clamp*

1. To use **Threaded Tube Clamp**, it will be necessary to form threads on the end of the **Cable Assembly**. This is easily accomplished by first placing the **1/4" - 20 Nut** on the end of the **Cable Assembly** with your fingers and then use a 7/16" box end wrench and turn clockwise until the desired amount of threads have been formed. **(Figure 19, page 14)**
2. After the threads have been formed, screw the Threaded Tube Clamp onto the Cable Assembly. **(Figure 27)**
3. The **Threaded Tube Clamp** may be used to anchor the **Cable Assembly** to the existing throttle cable bracket. **(Figure 28)** In some cases there is an existing hole, in other cases you can drill a 3/16" hole in the bracket.
4. The **Threaded Tube Clamp** may also be used to anchor the **Cruise Cable** using the **Extension Bracket. (Figure 29)**

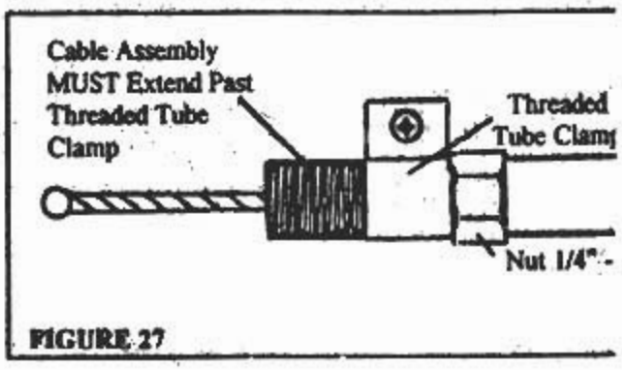


FIGURE 27

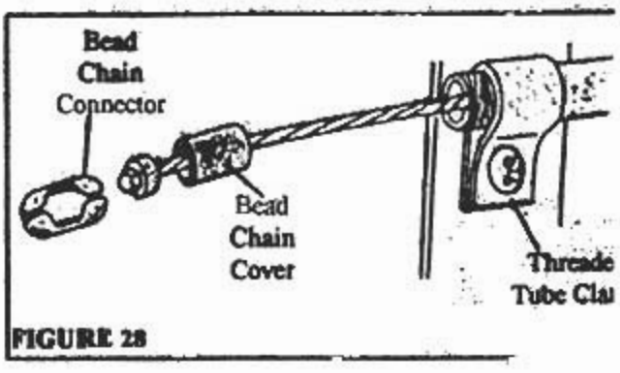


FIGURE 28

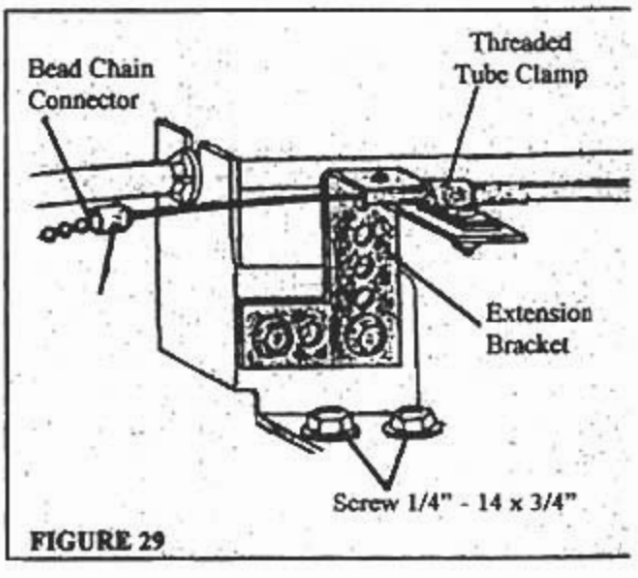


FIGURE 29

WARNING

Failure to follow the instruction manual could cause the Cruise Control to work improperly, possibly causing damage to your vehicle and injury or death to you and your passengers.

larness Assembly

Push Rubber Cover Grommet securely into place on the cover of the **Actuator Assembly. (Figure 30)**

Straighten the **Harness Assembly** and find the 4 pin mating connectors. Separate the 4 pin connectors. A small screw driver may be needed.

Harness Assembly needs a 3/4" hole to pass through bulkhead. You may find one nearby such as the speedometer cable hole or a small one you can file larger. If you find the right size hole in the right place, remove rubber grommet. If not, drill, saw, or punch a 3/4" hole in bulkhead. A hole a couple of inches to the left or slightly higher than the steering column is usually a good place. **(Figure 31)**

OTE: Check inside before drilling, sawing, or ling so you don't damage anything.

From engine side, pass four pin connector and VIOLET wire through hole. If you did not hook up the BLUE TACH wire and GRAY VSS wire under the hood, pass them through to the inside also.

Reattach 4 pin mating connectors and make necessary wire connections. (See page 18)

ealing Bulkhead

eal hole in bulkhead with **Sealing Putty** as shown **1 Figure 32.**

WARNING
ailure to follow the instruction manual could ause the Cruise Control to work improperly, ossibly causing damage to your vehicle and njury or death to you and your passengers.

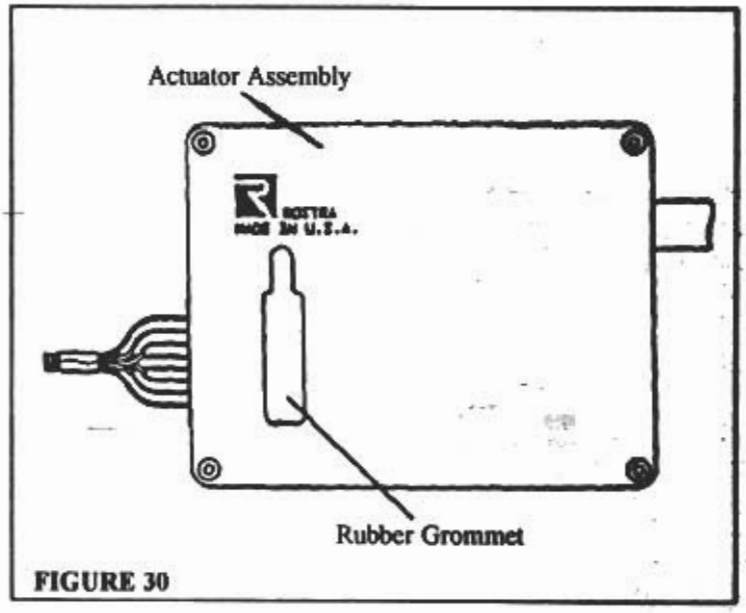


FIGURE 30

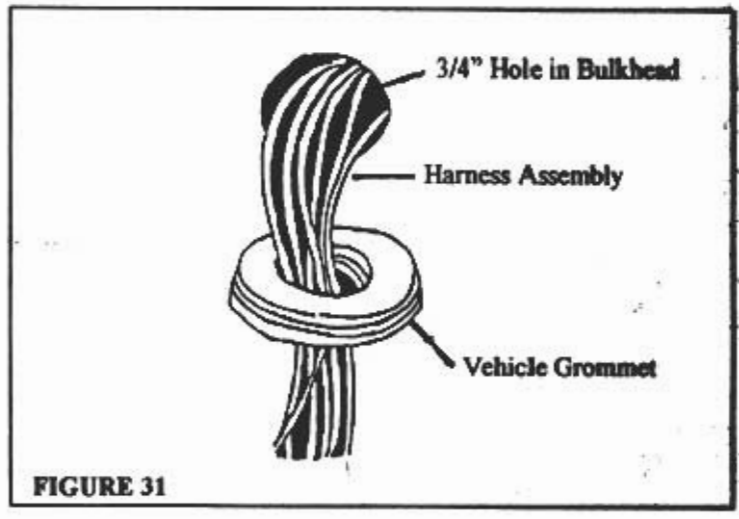


FIGURE 31

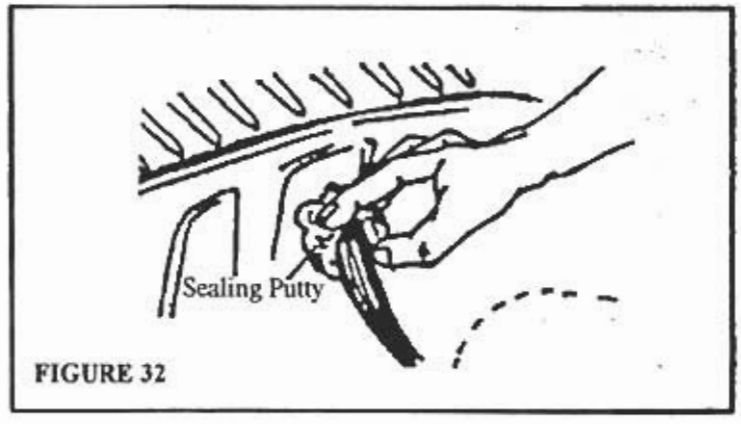


FIGURE 32

INSTALLATION PROCEDURES

Cruise Control Switch Installation

If your Cruise Control switch is the type which clamps on the turn signal lever, requires cutting the turn signal lever, or is mounted on the instrument panel, follow instructions packaged with it. If you have a switch which replaces the complete original equipment turn signal lever, remove the existing lever and install the Cruise Control switch and lever assembly as instructed in the vehicle shop service manual.

CAUTION:

If a two way radio is in the vehicle or is later installed, the Actuator Assembly should be located as far from the radio transceiver as practical (at least 3 ft) and the Harness Assembly should be routed as far from the radio wires and coaxial cable as practical. The radio should be wired directly to a battery ground connection and the standing wave radio of the antenna should be as low as possible.

WIRING ATTACHMENTS TO VEHICLE

To find a place to get electrical power you will need to "ground" one lead of your test light or volt-ohm meter. Find electrical ground by turning on the ignition switch and touching one lead to a hot fused terminal at fuse panel; touch other lead to unpainted metal part of vehicle. The metal you touch, if it makes continuity, is ground. Bracket for parking brake lever is usually a good ground. Turn ignition switch off.

NOTE: Some fuse panels are behind shields which must be removed first. On other vehicles the screw that mounts the panel must be removed to get to the fuses.

CAUTION:

Before making any wiring connections, be sure to disconnect your vehicle's negative battery cable to avoid electric shock and/or damage to the vehicle's electrical system.

WIRE COLOR	FUNCTION	LOCATION
BLACK	GROUND	Vehicle ground point which is a clean unpainted metal surface **NOTE:** DO NOT USE THE ENGINE AS A GROUNDING POINT. DO NOT CONNECT TO THE EXTENSION BRACKET
BROWN	ACCESSORY POWER	Fuse panel: fuse that has +12 volts when key is ON and 0 volts when key is OFF or in the START (CRANK) position.
RED	CONSTANT POWER	Hot side of brake switch - +12 volts
VIOLET	GROUND	Cold side of brake switch - 0 resistance when brake is not pressed, +12 volts or open resistance when brake is pressed.
BLUE	TACHOMETER	See *Vehicle Technical Information Guide* (Form #2482) or consult Vehicle Shop Manual
GRAY	VEHICLE SPEED SENSOR	See *Vehicle Technical Information Guide* (Form #2482) or consult Vehicle Shop Manual

SELF DIAGNOSTICS PROCEDURES

ntering Diagnostics Mode:

1. Turn the **Cruise Control Switch** to the **OFF** position
2. Turn the ignition switch to the **OFF** position
3. Press and hold the **RESUME/ACCEL** slide switch while you turn the ignition switch to the **ON** position ***without starting the engine.*** Now release the **RESUME/ACCEL** slide switch. (If you are using a 250-3592, 250-3593, 250-3742 or 250-3743 **Cruise Control Switch,** turn the ignition switch to the **ON** position ***without starting the engine,*** hold the **RESUME/ACCEL** button down while you turn the **Cruise Control Switch** to the **ON** position.)
4. The Diagnostics LED should be off at this time.

sting the Cruise Control Switch, Brake Switch Wiring, and Vehicle Speed Sensor (VSS) Signal:

__IF NOT____

eck steps to entering diagnostics mode
d try again

eck Programming Switch #7:
OFF: Normally OPEN switch
ON: Normally CLOSED switch

et incorrectly, reset and re-enter
agnostic mode

eck power to **Actuator Assembly**, if
ne of the diagnostic commands are
nctioning

eck Cruise Control Switch

Press and release SET/COAST button. LED should light each time button is pressed and go out when it is released.

IF YES

Press and release the RESUME/ACCEL switch. LED should light each time the switch is pressed and to out when it is released.

IF YES

Press and release the BRAKE. LED should light each time BRAKE is pressed and go out when it is released.

IF YES

Test VEHICLE SPEED SENSOR (VSS):
A second person is required to check visual status of the LED. Push car at least three (3) feet forward or backward, LED should flash at least once.

OR

Test AUXILIARY SPEED SENSOR (Signal Generator):
A second person is required to check visual status of the LED. One drive wheel needs to be jacked-up, take care to use a support stand for safety. Spin wheel by hand as fast as you can, LED should flash.

_____IF NOT_____

Check steps to entering diagnostic mode and try again

Check power to **Actuator Assembly** if none of the diagnostic commands are functioning

Check Cruise Control Switch

_____IF NOT_____

Check steps to entering diagnostic mode and try again

Check power to Red wire

Check power to **Actuator Assembly**, if none of the diagnostic commands are functioning

Check Brake Switch and wiring to Brake Switch

_____IF NOT_____

Check steps to entering diagnostic mode and try again

Check Programming Switch #10, it should be OFF

If switch is ON reset to OFF and re-enter diagnostic mode

You must spin the wheel at least 3 MPH or faster in order to test an auxiliary signal generator

_____IF NOT_____

heck steps to entering diagnostic mode
d try again

ome vehicles need to be pushed more than
ree (3) feet

onnection to the Vehicle Speed Sensor is
d

he connection point for the Vehicle Speed
ensor is not correct

Testing the TACH Signal

If all of the previous functions are correct, check the **TACH Signal**

1. Turn the **Cruise Control Switch** to the **OFF** position
2. Turn the ignition switch to the **OFF** position
3. Press and hold the **RESUME/ACCEL** slide switch while you turn the ignition switch to the **ON** position ***and start the engine.*** Now release the **RESUME/ACCEL** slide switch. (If you are using a 250-3592 or 250-3593 dash mount **Cruise Control Switch,** turn the ignition switch to the **ON** position ***and start the engine,*** hold the **RESUME/ACCE** button down while you turn the **Cruise Control Switch** to the **ON** position.)
4. The Diagnostics LED should be flashing. Rev the engine, the LED should flash faster at higher RPM's. If not:
   - Check steps to entering diagnostic mode and try again
   - Connection to TACH Signal source is bad
   - TACH Signal connection point is not correct

CONTROL SWITCH TESTS

To do the test:

1. Unplug the 8-pin connector from the Actuator Assembly.
2. Ground the test light lead and verify that the test light works by proving with a known power source.
3. **Follow Test Chart A for a Closed Circuit Control Switch, Test Chart B for an Open Circuit Control Switch**

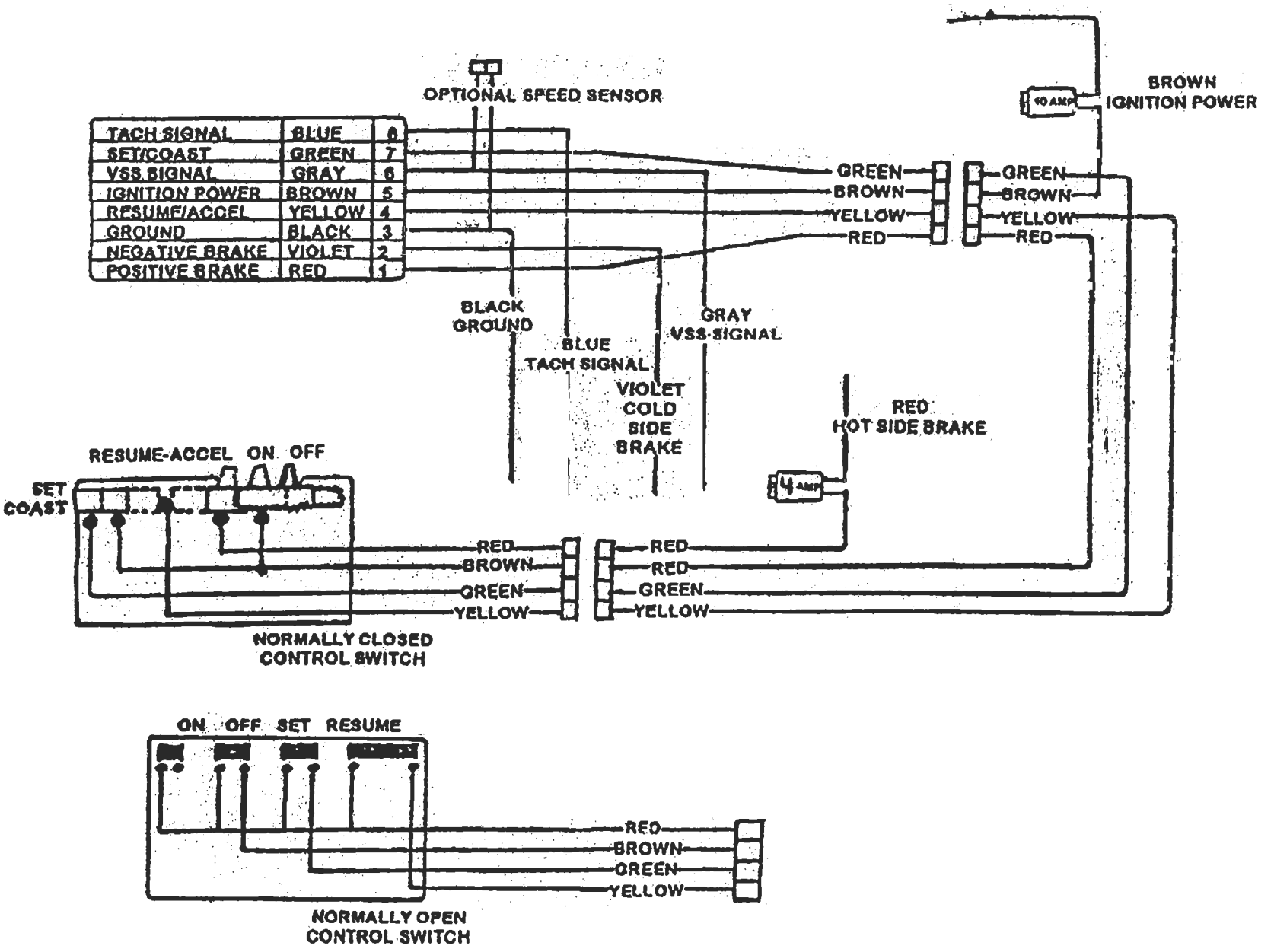
TEST CHART A (FOR CLOSED CIRCUIT CONTROL SWITCH)

IGNITION SWITCH POSITIONS	CONTROL SWITCH POSITIONS	RED	DARK GREEN	YELLOW	BROWN
OFF	OFF	OFF	OFF	OFF	OFF
OFF	ON	ON	ON	OFF	
OFF	ON press and hold SET/COAST	ON	OFF	ON	
OFF	ON press and hold RESUME/ACCEL	ON	ON	ON	
ON	ON	ON	ON	OFF	ON
CRANK or START	ON	ON	ON	OFF	

TEST CHART B (FOR OPEN CIRCUIT CONTROL SWITCH)

IGNITION SWITCH POSITIONS	CONTROL SWITCH POSITIONS	RED	DARK GREEN	YELLOW	BROWN
OFF	OFF	OFF	OFF	OFF	OFF
OFF	ON	ON	OFF	OFF	
OFF	ON press and hold SET/COAST	ON	ON	OFF	OFF
OFF	ON press and hold RESUME/ACCEL	ON	OFF	ON	
ON	ON	ON	OFF	OFF	ON
CRANK or START	ON	ON	OFF	OFF	

WIRING DIAGRAM



TECHNICAL SERVICE

In the event that you need technical assistance with trouble shooting, please have the following information ready when calling our Technical Service Department 910-277-1828. This information is important for a proper and speedy diagnosis of the problems encountered.

Model Number of Cruise Control System printed on box and manufacturers code printed on the

Actuator Assembly_____

Vehicle Make Model and Year:_____

Engine and Transmission:_____

Ensure that the Brake Switch wiring connections are correct.
Red wire of Wiring Harness Assembly is connected to "HOT SIDE"(color):_____

Violet wire of Wiring Harness Assembly is connected to "COLD SIDE" (color):_____

Ensure that the Brown wire is connected to an "ignition power source"_____

Speed Signal Source:

VSS (Vehicle Speed Signal): Gray wire connection point and wire color:

_____

Alternative Speed Signal Source (Part #)_____

Tachometer Signal: Blue wire connection point and color_____

Actuator Assembly programming switch settings:

	1	2	3	4	5	6	7	8	9	10
ON										
OFF										

List the parts used for the throttle connection and cable anchoring. Refer to the Parts List an Parts Diagram on Pages 4-5.

_____

_____

_____

36 MONTH/36,000 MILE LIMITED WARRANTY

AUDIOVOX CORPORATION (The Company) warrants to the original retail purchaser of this Cruise Product that should this product or any part thereof, under normal use and conditions, be proven defective material or workmanship within 36 months or 36,000 miles of the original purchase, such defect(s) will be repaired or replaced (at the Company's option) without charge for the parts.

To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to an approved warranty station or the Company at the address shown below.

This Warranty does not cover costs incurred for removal or reinstallation of the product, or damage to vehicle electrical systems.

This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HERE UNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 18 MONTHS FROM DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY THE PURCHASER FOR THE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

IN EASTERN U.S.A.: AUDIOVOX CORPORATION, 60 ARKAY DRIVE, HAUPPAUGE, NEW YORK 11788 Phone (516) 231-6051
IN WESTERN U.S.A.: AUDIOVOX WEST CORPORATION, 16808 MARQUARDT AVE, CERRITOS, CA 90701 Phone (213) 926-7758

OWNER'S WARRANTY RECORD

(To be completed by selling dealer and retained by customer)

Customer's Name_____

Address_____

Dealer Name_____

Dealer Address_____

City_____ State_____ Zip_____

Date Purchased_____ Date Installed_____

Make & Year of Car_____ Mileage at Installation_____